

AMENDMENT

RCE of USSN 10/023,831

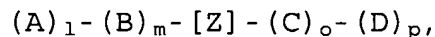
AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

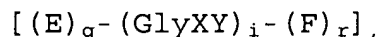
Claims 1-30. (Cancelled).

Claim 31. (Currently Amended) A synthetic recombinant hydroxylated triple helical protein comprising a polypeptide or peptide having one or more non-collagenous, non-triple helical domains which is a synthetic polypeptide or peptide selected from the group consisting of collagens, collagen fragments and collagen-like proteins represented by the following formula:



wherein:

Z is a domain comprising two or more repeat units of the formula:



wherein;

E and F represent sequences of one or more amino acids, which sequences may vary from repeat unit to repeat unit, and for each repeat unit q and r are each independently selected from 0 and 1, and

i is ≥ 1 such that domain Z comprises 2 to 1500 GlyXY triplets,

Gly represents glycine, and

X and Y, which may be the same or different, represent an amino acid, and wherein the identity of each amino acid represented by X and Y may vary from GlyXY triplet to GlyXY

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triplet, but wherein at least one Y of the $(\text{GlyXY})_i$ sequence must be proline,

A and D, which may be the same or different, each represent a polypeptide or peptide domain which optionally comprises a triple helical forming repeating sequence $(\text{GlyXY})_n$, wherein n is 2 to 1500 and l and p are each independently selected from 0 and 1,

B and C, which may be the same or different, each represent a polypeptide or peptide domain which is heterologous to collagen proteins and which does not comprise a triple helical forming repeating sequence $(\text{GlyXY})_n$, and m and o are each independently selected from 0 and 1.

Claim 32. (Previously Presented) The synthetic recombinant hydroxylated triple helical protein of claim 31, wherein domain Z comprises 10 to 300 GlyXY triplets.

Claim 33. (Previously Presented) The synthetic recombinant hydroxylated triple helical protein of claim 31, wherein in domain Z, $(\text{GlyXY})_i$ has an amino acid length which is at least three times greater than the combined amino acid length of E and F.

Claim 34. (Previously Presented) A biomaterial or therapeutic product comprising said synthetic recombinant hydroxylated triple helical protein of claim 32, wherein the biomaterial or therapeutic product is formed from a member selected from the group consisting of collagens, natural and synthetic collagen fragments, and natural and synthetic collagen-like proteins.

Claim 35. (Previously Presented) A biomaterial or therapeutic product comprising said synthetic recombinant

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hydroxylated triple helical protein of claim 33, wherein the biomaterial or therapeutic product is formed from a member selected from the group consisting of collagens, natural and synthetic collagen fragments, and natural and synthetic collagen-like proteins.

Claim 36. (Currently Amended) The synthetic recombinant hydroxylated triple helical protein of Claim 31, wherein said protein comprises ~~an exogenous~~ a biologically active domain(s).